

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No.: 09/840,823
Attorney Docket No.: Q64241

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A W-CDMA transmission rate estimation method comprising selecting a maximum likelihood transport format combination of a plurality of transport format combinations representing bit length combinations constituting a plurality of transport channels, each having a variable bit length, on the basis of correlation strengths between a normal encoded bit string and bit strings of data obtained by performing Viterbi decoding processing for data, of a reception output constituted by the respective transport channels, which corresponds to an arbitrary transport channel, and estimating a data transmission rate on the basis of the selected combination.

2. (original): A method according to claim 1, further comprising using a plurality of path metric values calculated in the Viterbi decoding processing as values indicating the correlation strengths.

3. (original): A method according to claim 2, further comprising storing, for each of the transport format combinations, a maximum path metric value obtained by using the transport format combination, and selecting a maximum likelihood transport format combination by

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comparing the stored maximum path metric values for the respective stored transport format combinations.

4. (original): A method according to claim 2, further comprising concurrently calculating maximum path metric values, for the respective transport channels, which are obtained by concurrently performing the Viterbi decoding processing for the respective transport channels when the respective transport format combinations are used, statistically processing the respective path metric values obtained for the respective transport channels in units of transport format combinations, and selecting a maximum likelihood transport format combination on the basis of the statistical processing result.

5. (original): A W-CDMA transmission rate estimation device comprising transmission rate estimating means for performing Viterbi decoding processing for data, of a reception output constituted by a plurality of transport channels each having a variable bit length, which corresponds to an arbitrary transport channel, and selecting a maximum likelihood transport format combination of a plurality of transport format combinations representing bit length combinations constituting the respective transport channels, thereby estimating a data transmission rate.

6. (original): A W-CDMA transmission rate estimation device for estimating a data transmission rate by performing Viterbi decoding processing for data, of a reception output

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constituted by a plurality of transport channels each having a variable bit length, which corresponds to an arbitrary transport channel, comprising:

maximum path metric comparing means for comparing a plurality of path metric values obtained for the respective transport format combinations when the transport format combinations are used in the Viterbi decoding processing, thereby selecting a maximum path metric value;

maximum path metric storage means for storing the maximum path metric value selected by said maximum path metric comparing means; and

estimating means for comparing the maximum path metric values for the respective transport format combinations stored in said maximum path metric storage means, and selecting a maximum likelihood transport format combination, thereby estimating a data transmission rate.

7. (original): A device according to claim 6, wherein

said maximum path metric comparing means and said maximum path metric storage means are provided in parallel for the respective transport channels,

said device further comprises statistical processing means for statistically processing the maximum path metrics stored in said respective maximum path metric storage means for the respective transport format combinations, and

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said estimating means compares the statistical processing results obtained by said statistical processing means for the respective transport format combinations, and selects a maximum likelihood transport format combination, thereby estimating a data transmission rate.

8. (new): A method according to claim 2, further comprising:
selecting a maximum path metric among transport format combinations from maximum path metric values corresponding to said transport format combinations stored in a maximum path metric storage section.

9. (new): A device according to claim 5, wherein the transmission rate estimating means comprises:

a Viterbi decoding section comparing correlation strengths between a maximum path metric value and a normal encoded bit string.

10. (new): A device according to claim 7, wherein said plurality of transport channels are processed concurrently.

11. (new): A method according to claim 1, further comprising:
selecting said maximum likelihood transport format combination on the basis of correlation strengths between a maximum path metric and a minimum path metric.

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12. (new): A method according to claim 1, further comprising:

selecting said maximum likelihood transport format combination on the basis of correlation strengths between a largest path metric and a second largest path metric.